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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/667,118

09/17/2003

Luiz B. Da Silva

BIO-002

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01/07/2005

SIERRA PATENT GROUP, LTD.

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EXAMINER

NGUYEN, HOAI AN D

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/667,118	<b>Applicant(s)</b> DA SILVA ET AL.	
	<b>Examiner</b> Hoai-An D. Nguyen	<b>Art Unit</b> 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8, 12-15, 18-20 and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano et al. (US 5,068,619).

#### **Nakano et al. teach a conductivity measuring device comprising:**

- A probe (Column 6, lines 6-60), with regard to claims 1, 12 and 24.
- An outer conductor (FIG. 3, transmitting electrode 8) forming an outer wall having an exterior and an interior (Column 3, lines 13-17), with regard to claims 1, 12 and 26.
- A non-conductive spacer (FIG. 3, the wall between transmitting electrode 8 and intermediate electrode 10) forming a first wall having an exterior and an interior, said non-conductive spacer coupled to said interior of said outer conductor (Column 3, lines 13-17), with regard to claims 1, 12 and 26.
- A conductive layer (FIG. 3, intermediate electrode 10) forming a second wall having an exterior and an interior, said conductive layer coupled to said interior of said first wall (Column 3, lines 13-17), with regard to claims 1, 12 and 26.

- An insulating layer (FIG. 3, the wall between receiving electrode 9 and intermediate electrode 10) forming a third wall having an exterior and an interior, said insulating layer coupled to said interior of said second wall (Column 3, lines 13-17), with regard to claims 1, 12 and 26.
- An inner conductor (FIG. 3, receiving electrode 9) forming an inner wall having an exterior and an interior, said inner conductor coupled to said interior of said third wall (Column 3, lines 13-17), with regard to claims 1, 12 and 26.
- Control electronics (FIG. 1, transmitting unit 2 and receiving unit 5) electrically coupled to said low capacitance measurement probe, said control electronics having a display (From column 2, line 58 to column 3, line 3), with regard to claims 12 and 24.
- Disposing a low capacitance measurement probe in a designated area (From column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 24.
- Directing an electrical current to said low capacitance measurement probe from control electronics (From column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 24.
- Measuring electrical impedance between an inner conductor and an outer conductor of said low capacitance measurement probe to collect a first measurement (From column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 24.

- Directing said first measurement to said control electronics (From column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 24.
- The designated area is human tissue (Column 6, lines 13-27), with regard to claim 25.
- An electrical circuit is created when said outer conductor and said inner conductor electrically communicate responsive to contact with tissue (From column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claims 2 and 13.
- Wires coupled to said outer conductor, said conductive layer, and said inner conductor (FIGS. 1 and 5), with regard to claims 3 and 14.
- The probe has a probe end (the end contacted the body 1) and a control end (the end connected to transmitting unit 2 and receiving unit 5) (FIG. 1), with regard to claims 4 and 15.
- A control electronics module (FIG. 1, transmitting unit 2 and receiving unit 5) configured to send electrical signals to the low capacitance measurement probe and configured to receive measurements for indication on a display (From column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 8.
- Probe is configured to send electrical signals to said control electronics (FIG. 1, and from column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 18.
- Control electronics are disposed in a module (FIG. 1, and from column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 19.

- Control electronics is configured to receive measurements and configured to indicate said measurements on said display (FIG. 1, and from column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 20.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 9-11, 16 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. in view of Underwood et al. (US 6,283,961).

**Nakano et al. teach all that is claimed as discussed in the above rejection of claims 1-4, 8, 12-15, 18-20 and 24-26, but they do not specifically teach the followings:**

- A handle coupled to said control end.
- A user interface coupled to said control electronics.
- Outer conductor, said inner conductor, and said conductive layer are comprised of a material selected from the group consisting of stainless steel, platinum, gold, silver, copper, and conductive plastic.
- Non-conductive spacer and said insulating layer are selected from the group consisting of polyethylene, polyurethane, polytetrafluoroethylene, polyimide, parylene, glass, epoxy, ceramic, and silicone.

**However, Underwood et al. teach an apparatus for electrosurgical spine surgery comprising:**

- A handle (FIG. 1, handle 19) coupled to said control end (Column 17, lines 25-33), with regard to claims 5 and 16.
- A user interface (FIG. 1, operator controllable voltage level adjustment 30 and foot pedals 37, 38, 39) coupled to said control electronics (Column 17, lines 36-43), with regard to claims 9 and 23.
- The outer conductor, the inner conductor, and the conductive layer are comprised of a material selected from the group consisting of stainless steel, platinum, gold, silver, copper, and conductive plastic (Column 13, lines 41-58), with regard to claims 10 and 21.
- Non-conductive spacer and said insulating layer are selected from the group consisting of polyethylene, polyurethane, polytetrafluoroethylene, polyimide, parylene, glass, epoxy, ceramic, and silicone (Column 18, lines 30-53), with regard to claims 11 and 22.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the conductivity measuring device of Nakano et al. to incorporate the teachings of a handle, a user interface, the outer conductor, the inner conductor, and the conductive layer being comprised of a material selected from the group consisting of stainless steel, platinum, gold, silver, copper, and conductive plastic, and non-conductive spacer and said insulating layer being selected from the group consisting of polyethylene, polyurethane, polytetrafluoroethylene, polyimide, parylene, glass, epoxy, ceramic, and silicone taught by

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Underwood et al. since Underwood et al. teach that such an arrangement is beneficial to provide a convenient and safe probe using commercially available conductive layer and insulating layer.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. in view of Nguyen-Dinh et al. (US 6,645,148).

**Nakano et al. teach all that is claimed as discussed in the above rejection of claims 1-4, 8, 12-15, 18-20 and 24-26, including:**

- A control electronics module (FIG. 1, transmitting unit 2 and receiving unit 5) configured to send electrical signals to the low capacitance measurement probe and configured to receive measurements for indication on a display (From column 2, line 58 to column 3, line 3 and column 2, lines 12-36), with regard to claim 6.

**However, they do not specifically teach the followings:**

- Control electronics disposed in said handle.
- A user interface coupled to said control electronics.

**Meanwhile, Nguyen-Dinh et al. teach an ultrasonic probe including pointing devices for remotely controlling functions of an associated imaging system comprising:**

- Control electronics (FIG. 8, steering control wheels 48 and 50, pointing device 52 and a select or validate button 54) disposed in said handle (FIG. 8, handle 44) (Column 1, lines 14-58, from column 7, line 52 to column 8, line 16, and column 10, lines 52-56), with regard to claim 6.
- A user interface (FIG. 8, steering control wheels 48 and 50, pointing device 52 and a select or validate button 54) coupled to said control electronics (Column 1,



lines 14-58, from column 7, line 52 to column 8, line 16, and column 10, lines 52-56), with regard to claim 7.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the conductivity measuring device of Nakano et al. to incorporate the teachings of control electronics disposed in said handle and a user interface coupled to said control electronics taught by Nguyen-Dinh et al. since Nguyen-Dinh et al. teach that such an arrangement is beneficial to provide a convenient and safe probe that significantly improves the comfort level of one using the probe during an examination as disclosed in column 2, lines 32-47.

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. in view of Underwood et al. as applied to claim 16 above, and further in view of Nguyen-Dinh et al.

**Nakano et al. and Underwood et al. together teach all that is claimed as discussed in the above rejection of claims 5, 9-11, 16 and 21-23, but they do not specifically teach the following:**

- Control electronics disposed in said handle.

**However, Nguyen-Dinh et al. teach an ultrasonic probe including pointing devices for remotely controlling functions of an associated imaging system comprising:**

- Control electronics (FIG. 8, steering control wheels 48 and 50, pointing device 52 and a select or validate button 54) disposed in said handle (FIG. 8, handle 44) (Column 1, lines 14-58, from column 7, line 52 to column 8, line 16, and column 10, lines 52-56), with regard to claim 17.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the conductivity measuring device of Nakano et al. and Underwood et al. to incorporate the teaching of control electronics disposed in said handle taught by Nguyen-Dinh et al. since Nguyen-Dinh et al. teach that such an arrangement is beneficial to provide a convenient and safe probe that significantly improves the comfort level of one using the probe during an examination as disclosed in column 2, lines 32-47.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant's attention is invited to the followings whose inventions disclose similar devices.

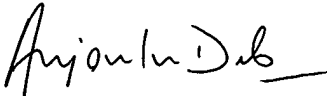
- Lees et al. (US 3,665,302) teach methods and apparatus for determining the condition of food.
- Huang et al. (US 6,080,149) teach a method and apparatus for monitoring solid tissue heating.
- Ishikawa et al. (US 6,261,247) teach a position sensing system.
- Maguire et al. (US 6,547,788) teach a medical device with sensor cooperating with expandable member.
- Banik et al. (US 6,770,027) teach a robotic endoscope with wireless interface.
- Hashimshony (US 6,813,515) teaches a method and system for examining tissue according to the dielectric properties thereof.

### CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai-An D. Nguyen whose telephone number is 571-272-2170. The examiner can normally be reached on M-F (8:00 - 5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 571-272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**ANJAN DEB**  
**PRIMARY EXAMINER**

HADN

Hoai-An D. Nguyen  
Examiner  
Art Unit 2858  
